## **PCT**

(30) Priority Data:

9602731-3

# WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> :	A1	(11) International Publication Number:	WO 98/01716	
F41A 17/44		(43) International Publication Date:	15 January 1998 (15.01.98)	

SE

(21) International Application Number: PCT/SE97/01236

(22) International Filing Date: 6 July 1997 (06.07.97)

(71)(72) Applicants and Inventors: LINDSKOG, Kjell [SE/SE]; Floravägen 27, S-931 39 Skellefteå (SE). FRISTRÖM, Ola [SE/SE]; Anumark 84, S-905 95 Umeå (SE).

10 July 1996 (10.07.96)

(74) Agent: HEDLUND, Alf; Patentkonsult Alf Hedlund AB, Kungsgatan 19, 5 tr, S-461 31 Trollhättan (SE).

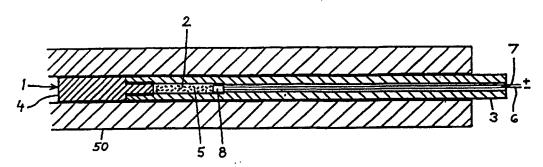
(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published

With international search report.

In English translation (filed in Swedish).

(54) Title: ARRANGEMENT RELATING TO A WEAPON WITH A BARREL



(57) Abstract

The invention relates to a device and to a method for rendering useless a weapon that includes a barrel, in the event of the weapon being taken or manipulated unlawfully. The device (1) includes a rod (3) having a cavity or bore (2). The rod (3) is adapted for insertion into the barrel (50) of the weapon, and an explosive charge (5) is placed in the cavity (2) of the rod. When an alarm is triggered, the explosive agent (5) is activated and the rod (3) and the barrel (50) are deformed.

## FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	Fl	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	Prance	LÚ	Luxembourg	SN	Senegal
ΑU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
ΑZ	Azerbaijan	GB	United Kingdom	MC	Моласо	70	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav	TM	Turkmenistan
BF	Burkina Faso	GR	Greece		Republic of Macedonia	TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	zw	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's	NZ	New Zealand	٠	
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	L	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

WO 98/01716 PCT/SE97/01236

#### ARRANGEMENT RELATING TO A WEAPON WITH A BARREL

The present invention relates to a device and to a method for rendering a weapon that includes a barrel useless if misappropriated or manipulated unlawfully.

One object of the present invention is to provide a device and a method for destroying a weapon in conjunction with its misappropriation and unlawful manipulation. This object is achieved with the device and the method defined in the characterizing clauses of respective Claims.

Because the inventive device will result in such damage to the weapon if misappropriated and used unlawfully as to make it extremely difficult and troublesome to repair the weapon, the inventive device is a highly effective theft deterrent.

The device can be combined with many different types of alarm devices that generate an alarm signal which causes activation of the inventive device and therewith destruction of the weapon.

The inventive device has both technical and economical advantages.

25

30

5

10

15

20

The invention will now be described in more detail with reference to an exemplifying embodiment thereof and also with reference to the accompanying drawing, in which <u>Fig. 1</u> illustrates schematically a barrel of a weapon provided with an inventive device; and <u>Fig. 2</u> illustrates the device and the barrel subsequent to activation of the device.

WO 98/01716 PCT/SE97/01236

2

The inventive device, referenced 1, includes a metal rod 3 that has a cavity or bore 2. The rod 3 has a shape and size which enables the rod to be inserted in, and fitted in, a barrel 50 of the weapon concerned, as evident from Fig. 1. One end of the cavity 2 is restricted or blocked by a plug 4. The cavity 2 is filled with an explosive substance 5, such as pentyl. An electric ignition wire 6 is extended to an electric igniter 8 in contact with the explosive substance 5, as evident from Fig. 1. A hole or bore 7 is provided for accommodation of the ignition wire 6.

The inventive device 1 functions in the following way. The ignition wire 6 forms part of an alarm circuit (not shown) of suitable design. When an alarm is triggered as a result of attempting to steal the weapon for instance, current is supplied to the ignition wire 6 and thus to the igniter 8, such as to explode the explosive substance 5. The explosive power of said substance is sufficient to partially expand and therewith deform the rod 3 and the barrel 50, as illustrated in Fig. 2. The inventive device thus functions to seriously damage the weapon when activated. The explosion also causes the rod 3 to fuse or weld to the barrel 50, so as to render removal of the rod practically impossible.

It will be understood that the structural components of the inventive device can vary widely within the scope of the invention. For instance, the cavity 2 may be replaced with one or more recesses or apertures of some other type and shape.

5

10

15

20

WO 98/01716 PCT/SE97/01236

The explosive substance may also be replaced with alternative explosive means and the hole or bore 7 may be plugged to enhance the effect of the explosion.

3

The invention is therefore not restricted to the illustrated and described embodiment, since changes and modifications are conceivable within the scope of the following Claims.

-----

j. , j

WO 98/01716

PCT/SE97/01236

4

#### CLAIMS

1. A device for rendering useless a weapon that includes a barrel, when the weapon is taken or manipulated unlawfully, characterized in that the device (1) includes a rod (3) that has a cavity or bore (2); in that the rod (3) is adapted for insertion into the barrel (50) of the weapon; and in that the cavity (2) or bore in said rod accommodates an explosive charge (5).

10

5

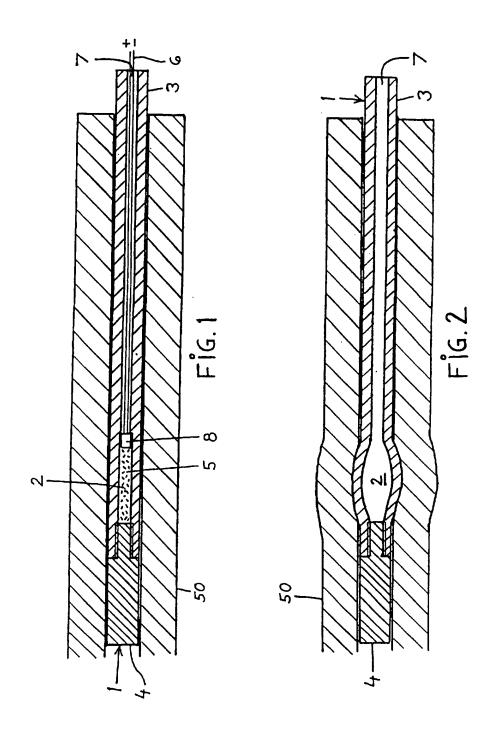
2. A device according to Claim 1, characterized in that the wall of the rod (3) is relatively thin in the region in which the explosive charge (5) is placed, so as to enable radial deformation of the rod (3) and the barrel (50).

15

- 3. A device according to Claim 1 or 2, characterized in that the explosive charge is pentyl or some like explosive substance.
- 4. A method of rendering useless a weapon that includes a barrel, when the weapon is taken or manipulated unlawfully, characterized by using a device (1) which functions to render the weapon useless with the aid of an explosive charge (5) or the like in conjunction with an alarm being triggered.

25

- 5. A method according to Claim 4, characterized in that both the device (1) and the barrel (50) of the weapon are deformed in response to an alarm being triggered.
- 6. A method according to Claim 4 or 5, characterized in that at least a part of the device (1) is placed in the barrel (50) of the weapon.



SUBSTITUTE SHEET (RULE 26)

## INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 97/01236

A CLASS	SIEICATION OF SUBJECT MATTER	<del></del>	
A. CLASS	SIFICATION OF SUBJECT MATTER		
IDCC. I	-414 17/44		
	-41A 17/44 o International Patent Classification (IPC) or to both na	ational classification and IPC	
B. FIELD	OS SEARCHED		
Minimum d	ocumentation searched (classification system followed by	classification symbols)	
IPC6: F	-41A		
Documentat	tion searched other than minimum documentation to the	extent that such documents are included in	the fields searched
SE,DK,F	-I,NO classes as above		
Electronic d	ata base consulted during the international search (name	of data base and, where practicable, search	terms used)
		, , , , , , , , , , , , , , , , , , , ,	,
WPI			
C. DOCU	MENTS CONSIDERED TO BE RELEVANT	· · · · · · · · · · · · · · · · · · ·	
Category*	Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.
A	SE 503762 C2 (R. BOGSTRÖM), 26 A		1-6
	(26.08.96), page 1, line 19 figure 1	- page 2, line 10,	
	rigure 1		
	<b></b>		
A	FR 2635581 A1 (SCHNEIDER, P.), 2		1,4
	(23.02.90), figure 2, abstra	ict	
	<b></b>		
Α	WO 9206345 A1 (PIP INDUSTRIAL SE		1,4
	16 April 1992 (16.04.92), fi	igure 1,	
	abstract		
	<del></del>		
A	DK 9400151 U3 (FIRMA TIGERBELT V		1,4
	8 July 1994 (08.07.94), figu	re 2, abstract	
i			
Furth	er documents are listed in the continuation of Box	C. X See patent family annex	
•	categories of cited documents:	"T" later document published after the inte date and not in conflict with the applic	rnational filing date or priority
	nt defining the general state of the art which is not considered  [particular relevance]	the principle or theory underlying the	
_	ocument but published on or after the international filing date	"X" document of particular relevance: the considered novel or cannot be considered.	
cited to	ent which may throw doubts on priority claim(s) or which is establish the publication date of another citation or other	step when the document is taken alone	
•	reason (as specified) on referring to an oral disclosure, use, exhibition or other	"Y" document of particular relevance: the considered to involve an inventive step	when the document is
means	•	combined with one or more other such being obvious to a person skilled in the	documents, such combination
	ent published prior to the international filing date but later than writy date claimed	"&" document member of the same patent	
Date of the	actual completion of the international search	Date of mailing of the international s	earch report
	•		
17 Sept	1997	23	-09- 1997
	mailing address of the ISA/	Authorized officer	
Swedish	Patent Office		
	S-102 42 STOCKHOLM	Filip von Friesendorff Telephone No. + 46 8 782 25 00	
racsimile	No. +46 8 666 02 86	elephotic 140.   T 40 6 /62 23 UU	

### INTERNATIONAL SEARCH REPORT

Information on patent family members

01/09/97

International application No. PCT/SE 97/01236

	atent document i in search repor	rt	Publication date		Patent family member(s)		Publication date
SE	503762	C2	26/08/96	AU EP SE WO	3713695 0784779 9403450 9611373	A A	02/05/96 23/07/97 12/04/96 18/04/96
FR	2635581	A1	23/02/90	NONE			
MO	9206345	A1	16/04/92	AU US	655946 5357704		19/01/95 25/10/94
DK	9400151	U3	08/07/94	NONE			

Form PCT/ISA/210 (patent family annex) (July 1992)